

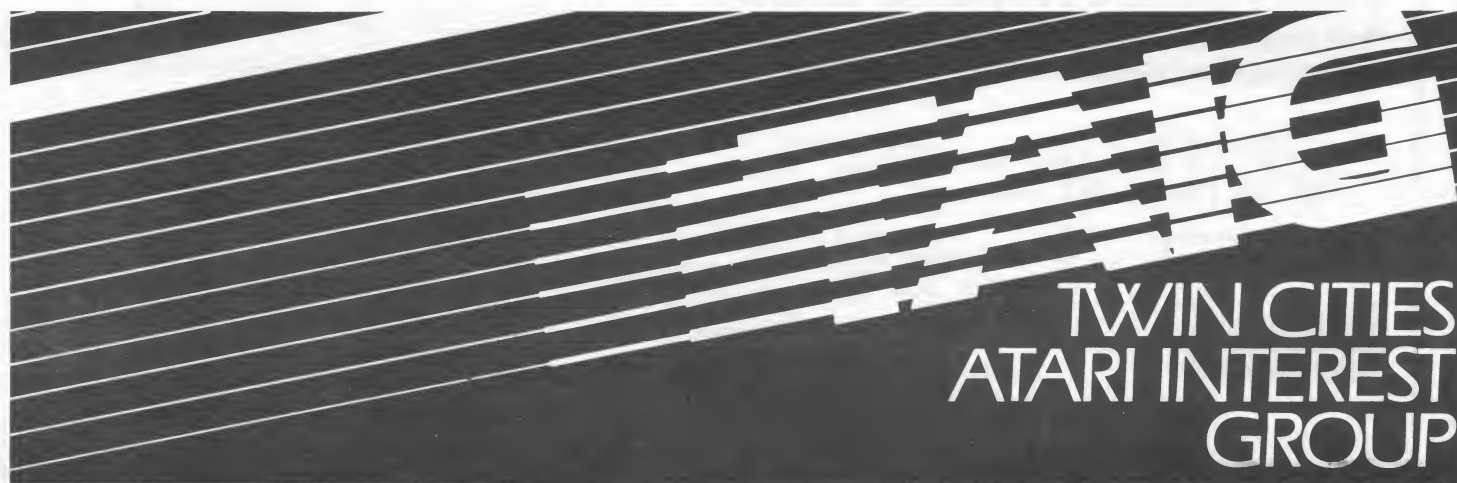
**TAIG****OCTOBER****TAIG**

RUNNING A BBS PAGE 3

HUMOR FROM ARIZONA PAGE 5

MAGNIPRINT II PAGE 6

THE BBS IS BACK UP, SWITCH TO ATASCII, AND GIVE IT A CALL.



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Twin Cities Atari Interest Group.  
3342 Humboldt Avenue North  
Minneapolis, Minnesota

**NEXT TAIG MEETING**

Sunday, October 27

TAIG 7:00 pm

at

St. Louis Park Rec. Center

5005 West 36th Street

St. Louis Park Mn.

**NEXT NAGS MEETING**

Wednesday, November 20

NAGS 6:30 pm

at

User Friendly Computers

8465 Plaza Blvd.

Spring Lake Park, MN.

# Wizard's Work

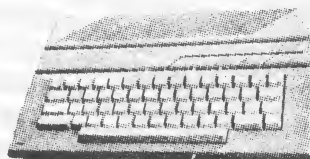
## your home computer center

Post Haste Square, County Rd. 18 & 36th Ave. No.,  
New Hope (North Side of Bldg.) 545-2136

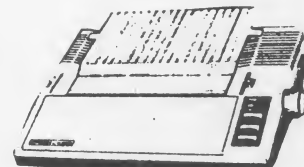
Supporting both the Atari 8 bit  
and the new 16 bit machines.



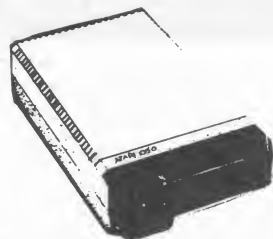
1010 cassette  
recorder \$55.00



130 XE's, 128k RAM, supports a  
64k RAM disk \$149.95

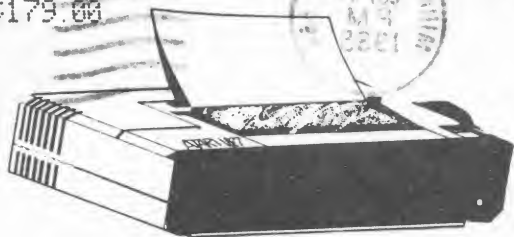


Epson's LX-80. \$240.00  
Tractor unit \$40.00

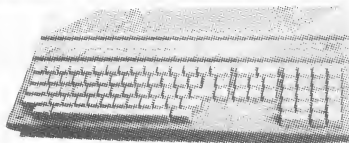


Atari 1050 dual density 5 1/4" drives.

Store 80k (single density) or 127k  
(enhanced density) of data per disk  
\$179.00



1027 letter quality printer.  
\$165.00, while they last.



THE NEW ATARI 520 ST

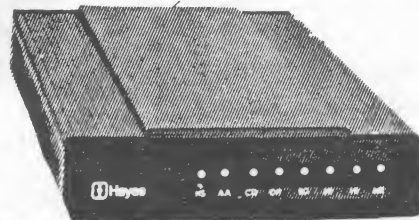
RGB version \$999.95, Monochrome  
version 799.95. 3.5" disks are  
also available.

520 ST software is NOW IN  
STOCK!

Software for the 8 bit  
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Mindwheel (2 drives needed)  
Wishbringer  
Rescue on Fractalus  
One on One  
Horse Racing Handicapper  
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Basic XE is in stock  
and much more...

Hayes 300 baud modem \$160.00



## The Up's And Down's Of Running a Bulletin Board

This article is about what you can expect in a BBS (bulletin board system) and what you have to do, as a Sysop (Systems operator.)

To start off, a bbs is run with a modem between the phone lines, so you would need a modem to own your own bulletin board. You will have to have a modem with autoanswer, at least 1 disk drive, and a printer. Also, you cannot forget the phone line. It cannot have call waiting; just a single line. Usually the cost of that's about \$17.00 a month.

You will be able to find several bulletin board programs. The better known ones are, Amis, F.O.R.E.M, and also now coming out the Bulletin Board Construction Set. The Mpp modem will require a special Forem program, just for the Mpp.

What are the advantages? First off, you get a lot of experience with basic programming. You learn that while you update the system. Another advantage is that you meet a lot of fellow Atarians, and other computer users. You can ask for help, get it and then help someone else out.

To run a board you will have to have patience, and be willing to spend time with the board, not just put it up and leave it. Be sure you allow plenty of time to get to know your bbs before you start; it is a lot of work. Call some of the bbs's listed and see how they are laid out.

What modem do I use?

They all work. The difference is the speed that they send info. You have:

300 bps-The slowest, but works nice

1200 bps-Goes real fast; it will transfer 1200 bytes per second.

2400 bps-The fastest modem for the Atari.

Note, the slower they are the cheaper they are.

The Mans Hideout bbs (my board) now uses a Hayes modem (formerly the Mpp modem), 2 Percom disk drives, and an Epson printer. If you look at my program you can kind of see what you can expect. Although I made a lot of modifications to it. I have put a lot of hours into this board; you can't expect to run one, like 1,2,3. It takes work. If you would like a taste of what Forem is like, look at the Amodem programs. They're laid out the same way. Also call the boards listed and ask them. If you need help call "The Mans Hideout" bbs 544-8156. If you would like the Forem program you can go through Taig.

Have fun! I know it will be quite a challenge

Bruce Lee  
The Man's Hideout

## Notes from the Pres.

It doesn't look as if we'll have a AMIGA demo this month. Guess Commodore has got their heads stuck in the sand. The AMIGA has reached the stores (demo units only) and no software (so much for the promised 20 titles).

We will be demoing F-15 Strike Eagle and hopefully the new Lucasfilm games The Eidolon and Koronis Rift. If you've gotten anything new, bring it along.

Software has been arriving for the ST. Titles which I have seen include PC/interComm, Mince Text Editor, Express letter writer, Haba C Compiler, ST-Forth, Hex, Mudpies, Hitchhikers Guide to the Galaxy, Zork (I II III) and other Infocom Games.

```
*
*      HELP SUPPORT TAIG      *
*
*      HAPPENINGS BOOK SALE   *
*
*      Oct 27th meetings for a *
*      $2 discount of $14.50  *
*
*      SUMMARY of 2 for 1 COUPONS *
*
*      76 Premier Dining      *
*      63 Distinctive Dining  *
*      219 Casual & Carry Out  *
*      112 Out and About      *
*      35 Theater & Arts      *
*      82 Movies              *
*      70 Getting Away (Hotels) *
*      22 Retail & Services    *
*      155 Sports & Recreation *
*
*      If you are unable to attend *
*      the meeting we will hold a *
*      book for you if we receive *
*      your money before Nov 1st.  *
*      Checks are to be made out to *
*      TAIG and send to TAIG 3342  *
*      Humboldt N., Mpls MN 55412  *
*
*      *****
```

Flash! Apple has brought suit against DRI over copyright infringement over the use of GEM and DRI has settled out of court, agreeing to redo GEM and letting Apple approve said changes before releasing the new GEM. And what may you ask was the infringement? They could not claim it was the coding since DRI took pains to make sure that they couldn't be challenged in that area. No it was a Visual Copyright. The fact that GEM looks like the Macintosh system. That's like one computer company suing another because they both use DOS. In a time when we complain of lack of standardization Apple has thrown tack on the road, insuring that their own ideas will not become the standard for other computers to follow. All in an attempt to slow down the acceptance of the ST and AMIGA. Oh yes their going after AMIGA next I'm told.

I'm surprised that DRI gave in so easy, but perhaps they were afraid that no software would be developed while court action was pending and decided to cut their losses and run. Unfortunately

this will spell trouble anyway as products now being prepared to interface with GEM will now be put on hold until DRI has their new GEM in place. A costly delay no matter how you look at it.

See you at the meeting, Dick Johnson

The Amazing Two Part Article  
-OR-

Notes from the SYSOP and  
the Editor.

by C. Johnson

Well, I've decided to combine two articles into one this month, so, if your looking for either of the above articles, you'll find them dispersed throughout the following text.

Well, the BBS has been back up for nearly a month, and there has been seen terrific use in that period. The only problems we have had are small ones, like the password file saving over the same 3 passwords, over and over, but it looks pretty well ironed out.

The 130XE is online, although we are not yet using the RAM disk. When the RAM disk is in use, expect to see a broder message base, a real data base, and some more functions. This brings me to the next topic I wish to discuss. I'd really like to know how you think the BBS can be improved, so, when your on the system, either leave a message to the SYSOP, or send me (gasp) U.S. Postal Service Mail, I'm at 1835 Shadyview Circle Plymouth, MN 55447. This is a semi-survey, and all serious suggestions will be considered.

At the last meeting, it was glaringly obvious that you were upset that the BBS was down. At that same meeting, and on the newsletter cover, it was stated that, once again, we had no articles. Someone in the audience had a solution, just upload the articles to the BBS. Wow, what a

concept! So, I did some work on the original FoReM program (not much, but...) and put the board back up. In the month we have been up, 3 articles were uploaded to the BBS, all were written by Dick Johnson. So, what does this mean? well, as of today, 10/14, we have had, once again, no articles from the members. Has it become "glaringly obvious" that I become more and more incensed with each month that passes without any articles? Is the newsletter begining to look slightly shoddy? a few more rough edges, even less editing (for spelling errors) than previously? Do you know why? Ever article in this newsletter, that does not have a by-line was written by either Dave or I, thus, we had less time for lay out and real editing. I want all of you to look at the cover of the newsletter, notice, it says "editors" not "authors." What do we have to do to get articles? Do we have to approach each of you individually and ask for them? I feel slightly uncomfortable doing that, and I'm sure most of you would too, but that will be starting soon. Do we have to get up at each meeting, and ask for them? Hey, why not, we have to waste space with each newsletter asking for them. I would rather have forfeited this space to a review of "Space Invaders" than to have to waste it trying to get articles, and I do mean waste. Every other month we issue a plea for articles, sometimes, it is succesfull, and we get one, yes, one. Other times, we get 0 (zero, nil, none, zilch), and I feel as

if we are wasting both our time and your time asking for them.

This isn't my newsletter, in fact, I pay \$15 a year to put it out. I get nothing for doing it, except for a good feeling when it turns out. Without articles from members, Dave and I have to either write from scratch, or retype articles so we can reprint them in the 3 column format. Doing either of these is time consuming, so much so that we don't have time for layout, the thing just gets taped together in any order. I don't think thats the way it should be, but without your support, we just don't have time to do it any other way.

Now, are you ready for an anti climax? With this issue of the newsletter, we have exausted all the reprints we had. So, if there are no articles next month, the newsletter will be very thin, and it is forseeable that we may have to go back to the post-card system in the near future if things don't change.

The BBS number is 473-2897. Hit a few carriage returns and enjoy the system.

## HAPPENINGS BOOK

\$14.50

See page 3



Reprinted from TACO.

LAIDBACK with (a) FIFTH  
by John Unger Zussman

BASIC, FORTRAN, COBOL... these programming languages are well known and (more or less) well loved throughout the computer industry. There are numerous other languages, however, that are less well known yet still have ardent devotees. In fact, these little known languages generally have the most fanatic admirers. For those who wish to know more about these obscure languages- and why they are obscure- I present the following catalog.

**SIMPLE** -- SIMPLE is an acronym for Sheer Idiot's Mono purpose Programing Linguistic Environment. This language, developed at the Hanover College for Technological Misfits, was designed to make it impossible to write with errors in it. The statements are, therefore, confined to BEGIN, END and STOP. No matter how you arrange the statements, you can't make a syntax error.

Programs written in SIMPLE do nothing usefull. Thus, they achieve the results of programs written in languages without the tedious, frustrating process of testing and debugging.

**SLOBOL** -- SLOBOL is best known for the speed, or lack of it, of it's compiler. Although many compilers allow you to take a coffee break while they compile, SLOBOL compilers allow you to travel to Bolivia to pick up the coffee. Forty-three programers are known to have died of boredom sitting at thier terminals while waiting for a SLOBOL program to compile. Weary SLOBOL programers often turn to a related (but infinitley faster) language, Cocaine.

**VALGOL** -- (with special thanks to Dan and Betsy "Moon Unit" Pfau) - From it's modest beginings in Southern California's San Fernando Valley, VALGOL is enjoying a dramatic surge of popularity across the industry.

VALGOL commands include REALLY, LIKE, WELL AND Y\*KNOW. Variables are assigned with the =LIKE and =TOTALLY operators. Other Operators include the "California Booleans," FERSURE and NOWAY. Repetitions of code are handeled in FOR-SURE loops. Here is a sample of a VALGOL program:

```
14 LIKE, Y*KNOW (I MEAN) START
%% IF
PI A=LIKE BITCHEN AND
01 B=LIKE TUBULAR AND
9.C=LIKE GRODY**MAX
4K (FERSURE)**2
18 THEN
4i FOR I=LIKE 1 TO OH MAYBE 100
86 DO WAH + (DITTY**2)
9 BARF(I)=TOTALLY
GROSS(OUT)-17SURE
IF LIKE BAG THIS PROGRAM
? REALLY
$$ LIKE TOTALLY (Y*KNOW)
```

VALGOL is characterized by it's unfriendly error messages. For example, when the user makes a syntax error, the interpreter displays the message, "GAG ME WITH A SPOON!"

**LAIDBACK** -- Historically, VALGOL is a derivative of LAIDBACK, which was developed at the (now defunct) Marin County Center for T'ai Chi, Mellowness, and Computer programing, as an alternative to the more intense atmosphere in the nearby Silicon Valley.

The center was ideal for programmers who like to soak in hot tubs while they worked. Unfortunately, few programers could survive there for long, since the center outlawed pizza and RC Cola in favor of bean curd and Perrier.

Many mourn the demise of LAIDBACK because of its reoutation as a gentle and non-threatening language. For example, LAIDBACK responded to syntax errors with the message, "SORRY MAN. I CAN'T DEAL WITH THAT."

**SARTRE** -- Named after the late existential philosopher, SARTRE is an extremely unstructured language. Statements in SARTRE have no purpose; they just are. Thus, SARTRE programs are left to define thier own functions. SARTRE programmers tend to be boring, depressed, and are no fun at parties.

**FIFTH** -- FIFTH is a percision mathematical language in which the data types refer to quantity. The data types range from CC, DUNCE, SHOT and JIGGER to FIFTH (hence the name of the language), LITER, MAGNUM, and BLOTTO.. Commands refer to ingredients such as CHABLIS, CHARDONNAY, CABERNET, GIN, VERMOUTH, VODKA, SCOTCH, and WHATEVERSAROUND.

The many versions of the FIFTH language reflect the sophistication and financial status of its users. Cammands in the ELITE dialect include VSOP and LAFITE, while commands in the GUTTER dialect include HOOTCH and RIPPLE. The later is a favorite of frustrated FORTH programmers who end up using ths language.

**C-** -- This language was named for the grade recived by its creator when he submitted it as a class project in a graduate programming class. C- is best described as a "low-level" programming language. In fact, the language generally requires more C- statements than machine-code statements to execute a given task. In this respect, it is very similar to COBOL.

LITHP -- This otherwise unremarkable language is distinguished by the absence of a "S" in its character set. Programmers and users must substitute "TH." LITHP is said to be usefull in prothething lithth.

DOGO -- Developed at the Masachussettes Institute of Obedience Training, DOGO heralds a new era of computer-literate pets. DOGO commands include SIT, STAY, HEEL, and ROLLOVER. AN inovative feature of DOGO is "puppy graphics", a small cocker spaniel that occasionally leaves a deposite as he travels across the screen.

#### Software...

How many of you wrote letters to the companies that had stopped producing Atari software? Well, some of the manufacturers came around, others, like a local company I wont mention, prefer to live in never never land. Hay, that's ok, it's our bussiness they aren't getting. Anyway, as was brought up at the last meeting, Dayton Hudson has opened up a chain of software stores, B. Dalton Software Etc. From their humble beginnings in the City Center, they have grown, and opened outlets in Southdale, Brookdale, Rosedale, and Ridgheaven. Are you ready for the clinker, the only Atari software they carry is on the back of Commodore games. You know, you buy the Commodore Version, and on the back side of the disk, the Atari version resides.

I called the Ridgheaven store, and asked if they planned to carry Atari software in the future, the answer was a simple no. Apparently, we do not use software, just like (according to Electronic Art's) we don't have disk drives. So, if you want to

see Atari software at local merchants, not only B. Dalton, but Saylor's Software First, even Sears, we must show them that, yes, we do exist. So, give them a call, and say, "I am here....."

#### Muititasking by Dick Johnson

The new buzz word today is muititasking. Amiga claims it has it and describes it as running up to 50 different programs SIMULTANEOUSLY.

Ok now lets come down to Earth a little. No computer made today with a single CPU can do more than one thing a time. What they can do is switch from one program to another to give the appearance of running several things at the same. This can be done effectively since when you use a computer, most of the computers time is actually spent waiting for something to happen, waiting for a keystroke, a line printed, a record read or written. Therefore a muititasking computer will go looking for another program to run when the one running has to wait. This is actually done by having a program called the Supervisor controlling the other programs and handling the I/O functions so the different program don't interfere with each other. Needless to say the Supervisor must be a very carefully written program.

Now where is multitasking useful. It is most offen found in large system where several terminals share the same computer. But what about the single keyboard - CPU combination. Well some things take time; sorts, large I/O operations, and initilizations. Now although these things ate up a lot of time on the 6502 machine, the 68000 is a lot faster and with the exception of line printing (for which I recommend a print buffer like Microfazer) there is little need for multitasking. For those who cannot do without it however I understand ST Forth supports multitasking.

#### Reprinted from G.T.I.A MAGNIPRINT II by Jim Schuetz

Print your Atari graphics like you've never seen them before, Magniprint II is the most powerfull printer utility available for your computer.

You can blow up you'r pictures to be wall sized posters, you can shrink them down to 1/8 of a page. Special options let you center the picture on the page. There are 13 different conversions from Micr-Painter, Print Shop, Micro Illustrator, etc.

When printing a poster sized picture an extra blank sheet of paper will be outputed between different sections of your poster. The completed sections will have to be taped together to form your poster. Because of the hi-res outputting, printing a poster can be very time consuming.

#### Article submission

Articles should be submitted in straight DOS 2 or 2.5 files. (Atari Writer, Home Text, and Speed Script 3.0) We can now also accept unconverted Letter Perfect files.

The article should have no formatting in it. Indent paragraphs 5 spaces (TAB key) and carriage return at the end of paragraphs.

How do you get your article to an editor? you can a) mail it, b) hand it to us at the meeting c) upload it to the BBS.

If you wish to upload it, make sure you tell us it is an article.

To mail an article, send to Newsletter editor  
1835 Shadyview Circle  
Plymouth, MN. 55447

You can have the article stored on disk, printed, typed or legibly handwritten. Any storage media will (generally) be returned at the next TAIG meeting.

#### LESSON FOUR: BRANCHING

One of the most important ideas in computing is the concept of conditional execution. This is the ability of the program to execute different routines depending on conditions at the time of execution.

The significance of this capability is best realized by considering how programs would operate in its absence. A program without conditional execution would not be able to change its program flow in response to conditions.

In other words, it would always execute exactly the same code in exactly the same order. Every run of the program would follow exactly the same sequence and perform exactly the same operations. Not very interesting, right?

To get a grip on conditional execution, we need to look at it in its simplest expression. The simplest type of conditional execution is binary in nature. We have a chunk of code; the 6502 will either execute it or it will not execute it. The decision is made on the basis of a boolean value; a true value will tell us to execute the chunk, while a false value will tell the 6502 not to execute the chunk.

The basic mechanism for doing this is through an instruction that performs a transfer of control. This involves nothing more than altering the program counter. You may recall that the program counter is a register in the 6502 that points to the address of the currently executed instruction.

When that instruction has been executed, the program counter is increased by the length of the instruction (1, 2, or 3 bytes, depending on the instruction). It now points to the next instruction. This little system allows the 6502 to step through a program in sequence.

But there are also instructions that will alter the value of the program counter, allowing the 6502 to jump to another area of memory and another part of the program. The simplest of these is the JMP instruction. It takes the form JMP LABEL.

This loads the value of the LABEL into the program counter. Its effect is to make the 6502 jump to the address of LABEL and continue execution from there. It is directly analogous to a GOTO instruction in Basic.

For conditional execution we need something more. We need the 6502 to have capability to make a binary decision based on a binary value. The solution used by the 6502 involves flags. These are single-bit Boolean values stored together in a single byte of the 6502 called the processor status register (SR).

The status register is eight bits wide but stores

only seven flags. These seven flags are labelled N, V, B, D, I, Z, and C. You have already encountered the C (Carry) flag and the D (Decimal) flag. In this chapter, we are concerned only with the N, V, Z, and C flags.

The magic instruction that makes possible conditional execution can take many forms. Its general form is BfV LABEL. The B stands for "branch". The "f" stands for a flag, and the "v" stands for the value of the flag, either true or false. However, in this case, we do not use the terminology "true or false".

Instead we use the terms "set" or "clear". "Set" means the same thing as "1" or "true", while "clear" means "0" or "false". The label is the address to which the 6502 should branch if the condition is satisfied. If the condition is not satisfied, then the 6502 will simply skip this branch instruction and go to the following instruction.

For example, suppose that we have the following instruction sequence:

```
LDA    #0
BCS    KARELIA
LDA    #5
KARELIA STA FISH
```

This will first load the accumulator with a zero. Then the 6502 encounters the BCS ("Branch on Carry Set") instruction. It looks at the Carry flag. If this flag is set then the 6502 will indeed branch to the label KARELIA. (For all you geography buffs, Karelia used to be in Finland.) In other words, if the Carry flag is set, the 6502 will skip over the LDA #5 instruction. Thus, a zero will be stored into FISH.

However, if the Carry flag is clear, then the 6502 will not take the branch. It will instead continue executing the next instruction, which will load a 5 into the accumulator. Then it will come to the label KARELIA and store that 5 into FISH. Thus, the value of the Carry flag determines whether a zero or a five is stored into FISH.

The converse of BCS is BCC ("Branch on Carry Clear"). This will cause the 6502 to take the branch if the Carry flag is clear.

There is also a pair of similar instructions for the V-flag. These are BVS and BVC. They will cause the 6502 to branch on the value of the V-flag.

Now the situation gets unnecessarily confusing. The instructions for the Z-flag should be BZS and BZC -- "Branch on Z Set" and "Branch on Z Clear". Unfortunately, the dumb designer of the 6502 thought he would get cute at this point, so instead he called these instructions BEQ and BNE, for "Branch on Equal" and "Branch on Not Equal". He never mentioned what he thought is supposed to be equal to what. We're stuck with it, so make the best of it.

Just remember what these instructions really mean BZS and BZC. If you think in terms of the Z-flag, it

will work out just fine. If you try to think in terms of equal or not equal, your attention will be diverted from the real truth of the matter and you may make mistakes. So keep your eye on the ball and think in terms of Z!

The next pair of branch instructions use the N-flag. These are even more insidious than the previous two. They are called BMI and BPL, meaning "Branch on Minus" and "Branch on Plus".

At first glance, these appear to be reasonable substitutions for BNS and BNC. After all, if you load the accumulator with a signed number, and the number is negative, then the N-flag will be set, while if the number is positive, the N-flag will be clear.

Thus, it would seem that BMI is truly equivalent to BNS and BPL is truly equivalent to BNC. This is the source of many a bug in beginner's programs. Consider the following fragment of code:

```
LDA FISH
SEC
SBC GOAT
BPL POSANSR
```

This code is supposed to branch to POSANSR if FISH is greater than GOAT. And indeed, if FISH is greater than GOAT, then when you subtract GOAT from FISH, you will get a positive result, right? Not necessarily!

Suppose, for example, that the value in FISH is \$C1 and the value in GOAT is 1. When the 6502 subtracts GOAT from FISH, it will get a result of \$C0. Note that the highest bit of \$C0 is set to 1. This is the value that will go into the N-flag. In other words, even though FISH is greater than GOAT, the 6502 will not take the branch, and this code will fail.

The moral of his tale is, don't take those instructions literally. They are misleadingly named. When you see BPL, don't think "Branch on Plus", think "Branch on N Clear". Otherwise, you'll screw up someday.

By the way, the correct branch to use in the above problem is BCS.

Now for a catch with the branch instructions. A JMP instruction is a simple absolute jump -- you specify the target address and it goes there. The designers of the 6502 realized that the vast majority of branch instructions only go a short distance. They therefore decided to implement the branch instruction as a relative branch.

The machine code doesn't specify the target of the branch, it only specifies an offset. In other words, instead of saying, "jump there", it says, "jump so many bytes forward or backward." The allowable range is 126 bytes forward or backward. Thus, you can't branch anywhere you want, only to nearby locations. If you must branch further, reverse the logic of the branch and use the branch to skip over a JMP statement.

At the last SPACE meeting a show of hands indicated that 8 member had ST's, and I'm sure that we have about the same number or more. So I feel its about time to start a ST group for sharing of knowledge , software (Public Domain) , experience (I've just started writing in "C") and of course a base of people for getting the dumb question answered from. This can be in the form of a group meeting before a SPACE or TAIG meeting or a sperate meeting at another location (Small groups can often get the use of Bank or Chruch meeting rooms for free).

I have wanted to get this going for some time but I find that you can only do so much with the time you have available. Therefore I'm looking for that old familar entity "THE VOLUNTEER". Someone to get the ball rolling, arrange a meeting place, run the meeting, set dues, etc. If your interested or even if you just want to attend, make the meeting Sunday and we'll talk.

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